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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,254	06/30/2000	Robert P. Knight	042390.P8659	9791

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EXAMINER

MORRIS, ANDREW P

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/607,254

Applicant(s)

KNIGHT, ROBERT P.

Examiner

Andrew P Morris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 2, 4, 5, 6, 10, 11 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Jouppi et al. (US Patent No. 6,112,318).

In regard to claims 1, 2, 10 and 11, Jouppi et al. disclose a method comprising providing a plurality of events, allowing a user to select a set of events to be monitored during a collection, programming performance counter registers (col. 5 lines 30-35) associated with said set of events selected to increment in response to an occurrence of a respective event (col. 1, lines 64-67), and periodically reading data from the performance counter registers during the collection session (col. 5 lines 30-35)

In regard to claims 4 and 5, Jouppi et al. disclose selecting all of the events of a performance object for monitoring (col. 3 lines 47-48).

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In regard to claims 6 and 14, Jouppi et al. disclose customizing the collection of performance data (col. 5 lines 46-50).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 10, 13 and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by Aubley (“Windows 2000 Performance Tools”, Windows & .NET Magazine Network, April 1, 2000).

Aubley provides a description of the Performance Monitor Tool found in the Microsoft Windows 2000 operating system. The Performance Monitor tool provides for the simultaneous monitoring of hardware counters, software counters, and operating system functions (Table 1) by implementing a set of API supported dynamic linked libraries (DLLs) (See “Windows 2000 Standard EXE files and Associated DLL’s” for a listing of DLL files associated with the Performance Monitor program). With the performance monitor tool a user is able to configure a collection session by choosing a performance object and a subset of counters pertaining to that object to be monitored (pg. 1 par. 4). Furthermore, the Performance Monitor tool has a display means which provides a name and description for each event associated with the performance object (Screen shots 1 and 2).

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 3, 8, 9, 10, 12, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Bolosky et al. (US Patent No. 5,485,574).

In regard to claims 3 and 12, Bolosky et al. disclose a machine readable medium causing execution of the steps of allowing a user to select a set of events to be monitored (col. 4 lines 7-15), programming performance counters, embodied by software variables (col. 4 lines 1-3), associated with the set of selected events (col. 4 lines 20-23), and periodically reading data stored in each of the performance counters during the collection session (col. 4 lines 20-23).

In regard to claims 8, 9, 17 and 18, Bolosky et al. disclose the monitoring of events associated with a hardware component (col. 1 lines 40-45), events associated with a user application (col. 1 lines 57-58), and events associated with an operating system function (col. 1 lines 57-58).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7, 15 and 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aubley in view of Jouppi et al. and Safford ("A Framework for Using the Pentium's Performance Monitoring Hardware", University of Illinois, 1995).

In regard to claims 15 and 19-24, Aubley describes the Performance Monitor Tool found in the Microsoft Windows 2000 operating system. The Performance Monitor tool provides for

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the simultaneous monitor of hardware counters, software counters, and operating system functions (Table 1) by implementing a set of API supported dynamic linked libraries (DLLs) (See "Windows 2000 Standard EXE files and Associated DLL's" for a listing of DLL files associated with the Performance Monitor program). With the performance monitor tool a user is able to choose a performance object and a subset of counters pertaining to that object to be monitored (pg. 1 par. 4). Aubley does not describe the user configuration of hardware counters. Jouppi et al. describe the user configuration of hardware counters by means of a control register (Figure 2, element 250). Each of the hardware counters are able to receive a plurality of events and each counter can be coupled to count a single event by way of an event signal selector (Figure 1, element 120). Jouppi et al. disclose the further advantage of allowing a user to create new signals through the combination of existing event signals (col. 2 lines 1-4). Safford discloses the programming of performance counters through the implementation of a device driver, which is controlled using an API supported dynamic linked library (pg. 55 par. 4).

It would have been obvious to one of ordinary skill in the art at the time of invention to add the user-configurable hardware performance counters of Jouppi et al. to the Windows 2000 Performance monitor system to allow a user to configure and monitor new and unique event signals. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of invention to configure the hardware performance counters of the combination recited above by creating a device driver and controlling said device driver through the use of an API supported DLL, as is described by Safford, in order to create a programming environment where the programmer is shielded from the arduous task of programming in lower level machine code.

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In regard to claims 7 and 25, the examiner takes official notice that the generation and assignment of identifiers to processes and events are well known in the art. It would have been obvious to one of ordinary skill in the art at the time of invention, as it would have been necessary, to add the ability to assign a name, or some other kind of identifier, to an event that had been customized by the user for the purpose of recognizing what event was being monitored.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brouwer et al. (US Patent No. 6,279,124) disclose controlling a counter using API commands. Patterson ("API Calls To Help You Optimize") discloses the use of API calls in monitoring system performance. The staff of BonAmi Software Corporation ("Supplementing Windows 95 and Windows 98 Performance Data for Remote Measurement and Capacity Planning") discloses the use of dlls and device drivers in controlling performance counters. Glew et al. (US Patent No. 5,796,637) disclose providing a plurality of events to a performance counter and coupling a single even to the counter by way of a controller. Dreyer et al. (US Patent No. 5,657,253) disclose providing a plurality of events to a performance counter and coupling a single even to the counter by way of a controller. Gover et al. (US Patent No. 5,557,548) disclose providing a plurality of events to a performance counter and coupling a single even to the counter by way of a controller.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew P Morris whose telephone number is (703) 605-4213. The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S Hoff can be reached on (703) 308 1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7414 for regular communications and (703) 746-7414 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

apm
February 12, 2003


MARC S. HOFF
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